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10/764,745	01/26/2004	Beat Stamm	14984.33	8753

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EXAMINER
WOODS, ERIC V

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/764,745	STAMM ET AL.
	Examiner	Art Unit	
	Eric Woods	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *14 October 2005*.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-24* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see Remarks pages 1-5, filed 14 October 2005, with respect to the rejection(s) of claim(s) 1-24 under 35 U.S.C. 103(a) have been fully considered and are persuasive in view of applicant's amendments, which have rendered such rejections moot.

The rejection of claim 7 under 35 U.S.C. 112, second paragraph, has been withdrawn since applicant amended the claim to correct the informality.

The objection to claim 17 has been withdrawn since applicant amended the claim to correct the informality.

As applicant has noted, it is strongly suggested that applicant amend the specification to include relevant co-pending applications. However, it is not mandatory, and as such, since applicant has submitted a supplemental IDS containing a listing of such applications, the requirement to amend the specification is withdrawn.

The objection to the specification is also withdrawn as per the above.

However, upon further consideration, a new ground(s) of rejection is made in view of various references as below.

Specification

Examiner accepts the specification.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 27 September 2005 was filed after the mailing date of the First Office Action on 17 August 2005. The

submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the

examiner is considering the information disclosure statement.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action: ⁹

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 19, 20, and 23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bauermeister et al (US 5,586,241 A).

Claims 19 and 20 are a system and computer program product implementing the

method of claim 1. Clearly, software implementing a method that clearly is intended to

be computer-implemented is subject to the same rejection without further comment.

The only difference between claim 19 and the method claim is that it requires a

computer with a processor and memory; prima facie, a general-purpose digital

computer must inherently contain those components (see for example the works by

Turing and Von Neumann to this effect from the 1940s and 1950s). Therefore, since

the references applied teach a computer-implemented method that would be inherently

taught by those references. Finally, it would be obvious that a software program for

making a computer execute a set of instructions is very clearly running on such a digital

computer. Thusly, the limitation of "one or more processors" is met. Essentially claim

20 merely recites a computer executing the program of claim 19 or the method of claim

1.

In response to applicant's arguments, the recitations in the various preambles of

claims 19 and 20 that are different from that of claim 1 have not been given patentable

weight because the recitation occurs in the preamble. A preamble is generally not

accorded any patentable weight where it merely recites the purpose of a process or the

intended use of a structure, and where the body of the claim does not depend on the

preamble for completeness but, instead, the process steps or structural limitations are

able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and

Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

As to claims 1, 19, and 20,

In a computing system that has access to one or more fonts, each font including glyphs

representing the corresponding characters of the font, a method for using externally

parameterizeable constraints to synthesize a font variant, the method comprising:

(Preamble is not given patentable weight, since it only recites a summary of the claim

and/or an intended use, and the process steps and/or apparatus components are

capable of standing on their own; see Rowe v. Dror, 112 F.3d 473, 42 USPQ2d 1550

(Fed. Cir. 1997), Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305, 51

USPQ2d 1161, 1165 (Fed. Cir. 1999), and the like.)

-Accessing a font file comprising a plurality of glyphs, each of the plurality of glyphs

storing glyph features; (Note Bauermeister Abstract, Figures 9-12, 2:20-50, each

character has its own structure and control points, where each glyph also has (4:30-55)

font parameters and characteristics that define that specific glyph or character. Hinting

fragments are also associated with (5:5-10) each glyph. Each file is distributed as a

Terafont binary with appropriate parametric data – see Abstract.)

-Utilizing the font file in accessing a scaled font that has been scaled for rendering at a

target size and a target resolution, the scaled font referencing hints that constrain how

glyphs of the scaled font are to be rendered at the target size and target resolution;

(Outline fonts such as the Terafont contain such information natively, such as in 2:20-

50, 7:15-65, and the like. That is, the hinting information can be provided with each

glyph (4:30-55), and is utilized by this type of font and the Terafont system anyway.

Note the discussion in 2:20-50, where it discusses how hinting is important at low

resolutions. When a font is generated, it is scaled for a certain size and resolution –

namely, a base resolution and size at which it is generated, and in any case when a font

is for use on an operating system (11:10-25) it is synthesized at a certain resolution,

since otherwise the system of Bauermeister would **not** have to perform the rescaling

operations discussed therein for display upon an appropriate output device.)

-Accessing one or more external font parameters that alter how the glyphs of the scaled

font are to be rendered; and (Bauermeister clearly teaches that external parameters

exist that determine how the characters of the font will be rendered – e.g. 17:64-18:16 – for example, the PANOSE number 18:30-55, with 19:30-65 providing more details on this, and the external parametric files are provided in 20:1-35, with such clearly constituting an external font parameter)

-Applying the one or more external font parameters to the scaled font to synthesize a font variant such that the hints from the scaled font are preserved in the font variant. (Font variants can be created using the system of Bauermeister, as discussed above, such that they have the same characteristics, as noted above, with the PANOSE number similarity and parametric files. The hints are bound to specific glyphs or fragments of glyphs (5:5-10, 16:63-17:35) but can be global under certain circumstances (17:36-40). In any case, 6:10-18 clearly teaches that one font can translate the font format to a different font format, and includes the binding of hints to characters in the different format that are appropriate for display on the output device. This clearly teaches that fonts can be converted as noted above. The font file (7:15-47) utilizes hints such that (12:15-25) characters are rendered using these constraints as bound to the glyph as provided (or overridden) in the parametric file. See for example 13:10-20 (Table II) where global hinting variables do exist. Therefore, such global hinting variables obviously do exist, and would be carried over between the scaled font and the font variant. Finally, Terafont does perform such scaling when a font needs to be rendered on a display at a given size and resolution (11:10-25).)

Therefore, Bauermeister clearly teaches all the limitations of the above claim, except that Bauermeister does not expressly teach that the font is initially scaled at a

target size and resolution, but this would have been obvious. As noted above,

Bauermeister teaches that the font engine scales (11:10-25) the font to fit a given output

display that has a certain resolution and size under Microsoft Windows or a similar

environment. Also, the font designer utilizing the INFINIFONT system of Bauermeister

would design the font at a particular size and resolution in the first place where the

result would be displayed on a monitor, thusly requiring the (Figures 8-11) font to be at

least initially rendered or created at a target size and resolution. Therefore, it would

have been obvious to have the font at such a target size and resolution.

Claims 2-17 are rejected under 35 U.S.C. 103(a) as unpatentable over

Bauermeister in view of Rappoport. Motivation and rationale for the modification and/or

combination of Bauermeister with Rappoport is provided in claim 2, and that motivation

and rationale are the same for all other and subsequent dependent claims.

As to claim 2,

The method as recited in claim 1, wherein accessing a scaled font that has been scaled

for rendering at a target size and a target resolution comprises accessing a scaled font

that includes font-hinting language instructions.

Rappoport clearly teaches as in claim 1 that hints are used in rendering fonts –

see 25:10-11, where rasterization hints are still used. Further, as stated above in the

rejection to claim 1, Rappoport teaches a new paradigm where each glyph has a

geometry associated with it, and various features that consist of boundary point and

support points, that are modified in keeping with known constraints and those

constraints are altered by and controlled with external parameters. Clearly, these

constraints are comparable to the hints as set forth above. Further, as established in

claim 1, grid-based scaling is still used on the boundary points. Rappoport further

teaches that the global constraints and system states presented in 23:1-16 allow new

programming language paradigms for programming the state-based constraint of the

Rappoport invention 4:9-15 and 4:24-5:3. Finally, it is well established by Rappoport

that systems like Postscript Type 1 and TrueType (3:3-10) are programming languages

that allow typographers to specify constraints for fonts and glyphs, and the metafont

system (2:10-22) allows for programming of font hints as well. Obviously, standard

hints from TrueType and Postscript could easily be used with the system of the

Rappoport application, since such hints are still used during the rasterizing process.

This claim is a trivially obvious variant of claim 1, and motivation for modification is

taken from the rejection to the parent claim, and is also provided by the fact that being

able to program such constraints makes authoring a font take less time than doing all

changes graphically. Clearly, the scaled font will have the hinting language instructions

for the reasons set forth above, since they are a fundamental part of rendering the font

in the first place.

Bauermeister does not absolutely expressly teach that the accessing of

parameters in a font-hinting language is done at the time of the accessing step.

Rappoport clearly teaches this limitation as above. It would have been obvious to one

of ordinary skill in the art at the time the invention was made to combine Rappoport with

Bauermeister to include the above feature for several reasons. Rappoport provides a

flexible hierarchy of font constraints (see Figure 1, where the glyph features are in a hierarchical structure) that makes for easier modification of the font parameters and otherwise is more efficient, as in 13:1-20, for various cases where constraints might have difficulty being parametrically applied. Further, Rappoport provides that the system can rapidly converge to a solution when solving font constraint equations that is valid and guaranteed (4:9-30), both of which provide additional functionality to Bauermeister. Such a combination does not change the principle of operation of the system, because Rappoport enhances the functionality of existing rasterizers rather than replacing them.

Bauermeister clearly teaches that the font has font-hinting language instructions, as in Table II as discussed in the rejection to claim 1. Further, 2:20-50 and 11:10-25 clearly teach that output fonts can be converted to TrueType format or other formats that constitute 'font-hinting language instructions' and the Terafont system itself is natively a font-hinting language since it allows the user to specify constraints and the like. Bauermeister clearly teaches that the (7:15-65) characters have parameters such as character widths and space, line spacing, and the like, and that fonts contain such information. Bauermeister 13:37-50 states that parameters such as distances between the characters are defined and changed in the replication of a font (13:65-14:10), which clearly (15:25-30, 17:64-18:15) consists of changing the spacing of characters and compressing them (Figure 9-12, 24:50-26:10) as the font designer desires, and further the parameters to be accessed can be global size for the PANOSE number and they

are set during the conversion and generation process anyway, as explained above, and in 11:5-20.

As to claim 3, Rappoport clearly teaches (as in claim 1) that the user can manipulate font parameters. Further, in 15:1-10 and in other locations, a user interface to simultaneously adjust several external font parameters is taught, and these clearly effect how the font is rendered, for example, one is listed in Figs. 8A-8D, and for example the width of a stem is changed in Figs. 4A-4B, as noted in the first paragraph. Also, in Fig. 5 it is shown how the user can manipulate a character and can change the vertical and horizontal amount of compression (e.g. the position) as recited by applicant in the instant claim (see Rappoport 15:1-25).

Bauermeister clearly teaches that the font has font-hinting language instructions, as in Table II as discussed in the rejection to claim 1. Further, 2:20-50 and 11:10-25 clearly teach that output fonts can be converted to TrueType format or other formats that constitute 'font-hinting language instructions' and the Terafont system itself is natively a font-hinting language since it allows the user to specify constraints and the like. Bauermeister clearly teaches that the (7:15-65) characters have parameters such as character widths and space, line spacing, and the like, and that fonts contain such information. Bauermeister 13:37-50 states that parameters such as distances between the characters are defined and changed in the replication of a font (13:65-14:10), which clearly (15:25-30, 17:64-18:15) consists of changing the spacing of characters and compressing them (Figure 9-12, 24:50-26:10) as the font designer desires, and further

the parameters to be accessed can be global size for the PANOSE number and they are set during the conversion and generation process anyway, as explained above, and in 11:5-20.

As to claim 4, this is a substantial duplicate of claim 3, except that the characters are being expanded rather than compression. For example Figure 5 shows both compression and expansion in at least a horizontal or vertical direction. The rejection to claim 3 is incorporated by reference.

As to claims 5 and 6, Rappoport in 15:1-15 and Figs. 8A-8D teach that the degree of bolding of a character can be changed, wherein bolding clearly changes the weight of a character as defined in the instant claim. Clearly, changing the degree of bolding (and in Fig. 5) allows the changes to go in either direction – compression or expansion.

As to claim 7, this is a trivially obvious variation. Offsetting a glyph in the vertical direction comprises generating superscripts or subscripts. It is well known in the art to perform this step – standard word processing software such as Microsoft® Word™ clearly allows the user to make this kind of change, and it would be obvious that the user should be able to control the degree of offset in order to emphasize or control the degree of emphasis of superscript or subscript or footnoting. It would have been trivially obvious to modify Rappoport to allow the user to modify the degree of offset, since it is a well-known part of typography. Examiner also takes Official Notice of this fact.

As to claim 8, this claim is a substantial duplicate of claim 2, the rejection to which is incorporated by reference, where the claimed step is the same. Since this is a

method claim written using "comprising" language, it is open ended; since the method

claim is implemented using software, it would be obvious that the steps can be

arbitrarily rearranged. Finally, since it has been established that TrueType™ and

similar prior art font hinting languages allow the user to specify constraints, it would be

obvious that since the system of Rappoport allows users to program it, that the external

parameters could clearly be programmed into the constraint state machine that is

known to be programmable, which would fulfill the limitations of this step.

As to claim 9 and 10, they are substantial duplicates of claims 3 and 4 (the

rejections to which are incorporated by reference), in that the recited limitations are the

same, they are simply applied to different steps in the method. This would be a trivially

obvious variant (design choice as to where to place the step in the method and/or

computer program, where it has been well established that software can be written in

modules and/or infinitely arbitrarily rearranged). Finally, clearly applying the external

parameters using the interface specified in claim 1 (for example to effect the bolding, or

simply simultaneously changing several parameters as set forth in previous rejections

above) would require that the glyphs be redrawn (as stated in the discussion of the last

clause of claim 1).

As to claim 11, it is a substantial duplicate of claim 7, the rejection to which is

incorporated by reference. By the logic set forth in the rejections for claims 9 and 10

above, the limitations are obvious.

As to claim 12, see Rappoport Figs. 18A-18D and Figs. 19-21, where clearly a

common, standardized distance is maintained between glyphs regardless of variations

in parameters applied globally or to each glyph separately. In Figs. 18A-18C, the

reference heights are maintained. Also, for the reasons discussed earlier, see the

rejection to claim 7 – languages are dependent upon line spacing and the rejection to

claim 1 sets that forth in more detail – it would be obvious that maintaining a reference

height and spacing would be useful and therefore obvious, and the system / method of

Rappoport clearly can perform the recited limitation, as demonstrated in the cited

Figures.

As to claim 13, this limitation is taught in the rejection to claim 1, where the

alteration of a global parameter causes all relevant or effected glyphs to be recalculated

a new font variant created. As stated therein, the fonts are rendered / rasterized using

known hints, and further they are prima facie rendered with the changes in the external

font parameters as set forth in the rejection to claim 1.

As to claim 14, this is a trivially obvious variant of claim 12, where the limitations

from that claim are merely added to claim 13. As such, that rejection is incorporated by

reference.

As to claim 15, scan conversion is the method used to specify which pixels to fill

and what to fill them with (definition taken from

http://www.cs.berkeley.edu/~ddgarcia/cs184/r3/). Clearly, this is another name for and

is synonymous with the process of rasterization, which clearly is performed by

Rappoport as stated in the rejection to claim 1, where the creation of a new font variant

involves rasterizing using the set external hints. Also, it is established in claim 1 that the

system of Rappoport uses font outlines (the boundary points for example). Therefore, all the limitations of this claim are met.

As to claim 16, this again corresponds to the process of rasterization, which inherently generates a bit-map of the glyph. Clearly, a bit-map is defined by pixels, where each pixel includes red, green, and blue components (channels) for display on a display device, where the intensity of each of the sub-components of a pixel is set by the intensity value of the RGB channels. Clearly, the utilization of rasterization hints as taught by Rappoport covers this limitation. Further, the entire purpose of the Rappoport invention is to more accurately render glyphs (4:1-15). Prima facie, these glyphs will comply with the hints and external constraints, because they are only generated when changes in the parameters cause the constraints to be invalidated, and the newly generated glyphs will prima facie result in valid constraints.

As to claim 17, this step is inherent. That is, in order for a font to be used as part of a document and in order for a font to be used as part of a document (e.g. the Figures of the instant application), the glyphs of a font file (as in element 100 in Rappoport) would prima facie be rendered and rasterized (e.g. scaled) according to the capabilities of the display device and the operating system and applications (e.g. line spacing, inherent instant device resolution, et cetera). Examiner further takes Official Notice of the fact.

Claim 18 is rejected as unpatentable and obvious under 35 U.S.C. 103(a) over Bauermeister in view of Betrisey et al (US PGPub 2001/00448764 A1).

Bauermeister does not explicitly teach this limitation while Betrisey does. The

idea of caching anything is well known in the art, because it speeds access to whatever

is cached, and it would be obvious to apply it in this case. Betrisey teaches in [0034]

the caching of the raster bitmaps (e.g. the rasterized version of a font), which clearly

constitutes "caching the font variant" so that it can be more efficiently accessed in

response to the request of an application program. Motivation for combination is

provided by the above cited fact – that caching speeds access and is inherently more

efficient (see also [0035] and [0038]).

Claim 21 is rejected under 35 U.S.C. 103(a) as unpatentable over Bauermeister

in view of Brassell et al (US 5,684,510 A).

As to claim 21,

Bauermeister does not expressly teach this limitation, but Bauermeister clearly teaches

adjusting the space between lines as well as glyphs spacing (7:40-55,19:35-55, and the

like) and could be interpreted to fairly suggest this limitation. In any event, Brassell

clearly teaches that hinting controls alignment between character features and

character spacing (3:55-4:5), so this limitation would therefore be obvious. It would

have been obvious to one of ordinary skill in the art at the time the invention was made

to modify Bauermeister in view of Brassell, although examiner contends that in light of

the teachings of Brassell, that such a feature would have been inherent. Motivation for

such a combination is that Brassell teaches that such correction fixes slight distortions

and makes characters appear properly and evenly spaced to the viewer (3:55-4:15).

As to claim 22, this is done in response to pagination or dividing text into columns, which is taught by Bauermeister (19:35-65), e.g. that a different format may be used locally for a document such that the spacing would be changed to preserve the pagination, which in light of Brassell makes sense. Motivation and rationale are incorporated from the rejection of claim 21 above.

Claim 24 is rejected under 35 U.S.C. 103(a) as unpatentable over Bauermeister as applied to claim 1 above, and further in view of Qureshi et al (US 6,456,305 B1).

Bauermeister does not expressly teach this limitation, but it would have been obvious. It is well known in the art to be able to type in a numerical percentage for scaling. Qureshi teaches that text objects may have a percent-based font size. Further, the percent-based font size maybe resized with the scalar and various other details (5:18-25). It is clear that the resizing command would be given to the system of Bauermeister to derive the scaled version of the font, where the scaling would be a percentage as specified in the claim. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bauermeister in view of Qureshi to accept percentage scaling values because web pages use such techniques and the use of scalar factors is easier for calculation purposes than any kind of vector multiplication because it is inherently more computationally efficient (see also US 5,754,873, 1:45-65, and the like, where all these font scaling factors are provided as percentages). Finally, clearly a percentage-scaling factor will be either a compression or expansion and thusly fulfill the requirements of the claim.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Woods whose telephone number is 571-272-7775. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Eric Woods   December 30, 2005

Ryan Yang, P.E.